

REMARKS

Claim 24 has been amended to correct clerical error. Thus, no new matter has been added. Applicants respectfully request entry of the amendments and reconsideration of the present application in view of the amendments and the remakes set forth below.

Claim Objections

Claim 24 has been objected to because of the informalities. A typographic error, the second period after "compound", has been removed. Applicants respectfully request withdrawal of the objection.

Claim Rejections – 35 U.S.C. § 103

Claims 1, 4, and 21-22 have been rejected under 35 U.S.C. § 103 as being unpatentable over Storrow et al in view of Swarup. Applicants respectfully submit that rejected claims are allowable over the recited references as discussed below.

Claim 1 recites, among the other things, "a neutral silica sol...having a pH value of 5.0 to 7.8." In rejecting the claim, the Examiner asserts that the instant claimed range of 5 to 7.8 and Storrow's disclosed range of 8 to 10 are so close to each other so that one skilled in the art would have expected them to have the same property. However, Comparative Examples 1-2 in Table 1 of the specification and Comparative Examples 1-4 in the second declaration, for example, indicate Storrow's recited range (pH 8~10) is **inoperative with the present claimed invention**. Moreover, a Third Declaration is attached hereto, which demonstrated effect of the claimed pH range. As can be seen, both the efflorescence resistance test and the anti-staining properties of the material prepared at pH 7.8, within the presently claimed range, are unexpectedly superior to the results on the material at pH 8.0, within the pH range of Storrow. These unexpected results would effectively rebut any *prima facie* showing of obviousness, even if present. Consequently, no *prima facie* case of obviousness has been established with respect to Claim 1.

The rest of the rejected claims depend from Claim 1 and further defines additional technical features of the present invention. In view of the patentability of Claim 1, and further view of the additional technical features, Applicants respectfully submit that the rest of the rejected Claims 4, 21 and 22 are patentable over the cited references.

**Claim Rejections – 35 U.S.C. § 103**

Claim 2 has been rejected under 35 U.S.C. § 103 as being unpatentable over Storrow et al in view of Swarup and further in view of Kano,

Claim 3 has been rejected under 35 U.S.C. § 103 as being unpatentable over Storrow et al in view of Swarup and further in view of Kano and Gagliardi, and

Claims 1, and 21-22 have been rejected under 35 U.S.C. § 103 as being unpatentable over Storrow et al in view of Inagaki.

Since the rejected claims depend from Claim 1 and the above cited references are silent about pH range of neutral silica sol, these are patentable with the same reason presented for Claim 1. Applicants respectfully request withdrawal of the rejection.

**Claim Rejections – 35 U.S.C. § 103**

Claims 1, 4, 20-22, 25, and 26 have been rejected under 35 U.S.C. § 103 as being unpatentable over Weinberg et al in view of Swarup. Applicants respectfully submit that rejected claims are allowable over the recited references as discussed below.

Claim 1 recites, among the other things, “a **neutral** silica sol...having a pH value of 5.0 to 7.8... **electrical conductivity**...is 1 mS/cm or less,” while Weinberg et al. recite “...a pH from about 7.0 to about 14.0... an **alkali**...silica dispersion.” While it is true that **mere optimization** range is not generally supportive of patentability, evidence indicating that the claimed ranges are critical can support patentability. See MPEP 2144.05(II). In the present case, the evidence show that a use of the neutral silica sol whose pH range is 5 to 7.8 remarkably improve anti-staining property and water resistance, and the pH range is very critical for these property as shown in the Third Declaration. The data indicate that when the pH of 7.8 which is within recited range are applied to the materials, far superior results in efflorescence and water staining resistance were obtained, compared when the pH value is even slightly off, namely 4.5 and 8.0. These **unexpected results rebut any prima facie case of obviousness** based on the cited prior art. See MPEP 2144.05 (III) Applicants respectfully request withdrawal of the rejection.

Application No.: 10/596,590  
Filing Date: June 16, 2006

Further, Claim 1 recites a use of “**a neutral** silica sol...” and “**electrical conductivity**...is 1 mS/cm or less,” while Weinberg recites “an **alkali**...silica dispersion” and is silent about the electrical conductivity. Therefore, one having ordinary skill in the art would not have a **reasonable expectation of achieving successful results** applying Weinberg’s teaching in connection with materials having such radically different attribute. **Absent such a reasonable expectation of success**, no *prima facie* showing of obviousness can be set forth.

The rest of the rejected claims depend from Claim 1 and further defines additional technical features of the present invention. In view of the patentability of Claim 1, and further view of the additional technical features, Applicants respectfully submit that the rest of the rejected Claims 4, 20-22, 25, and 26 are patentable over the cited references.

### CONCLUSION

In the light of the applicant’s amendments to the claims and the foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

#### No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

**Application No.: 10/596,590**  
**Filing Date: June 16, 2006**

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

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